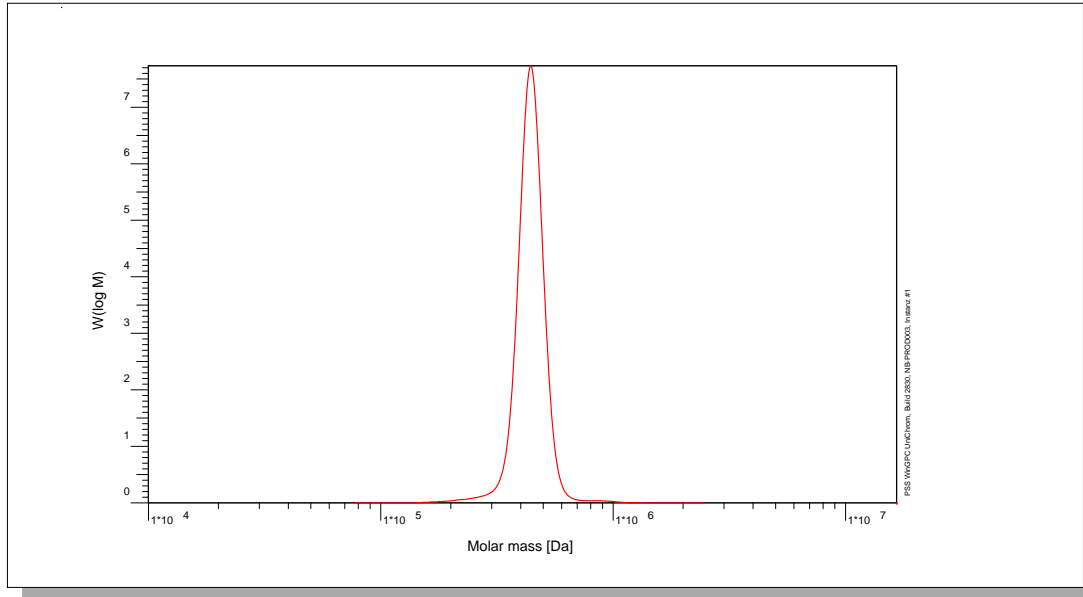


Certificate of Analysis

Polymer type: Poly(isoprene-1.4)
 Part No: PSS-pio470k
 Lot No: pio020616

Molar Mass Distribution



GPC/SEC - Conditions

| | | | |
|---------------------------------------|-----------------------------------|---------------|-------------|
| Sample concentration | 1,00 g/l | Inject volume | 20 µl |
| Solvent | Tetrahydrofuran | Flow rate | 1,00 ml/min |
| Precolumn [8 x 50 mm] | PSS SDV 5µm | Temperature | 23 °C |
| Columns [analytical, each 8 x 300 mm] | PSS SDV 5µm 10e3Å / 10e5Å / 10e6Å | Operator | J.Preis |
| Data Acquisition Software | PSS WinGPC | | |

GPC/SEC - Results

| Detector | Mw [Da] | Mn [Da] | Mp [Da] | PDI [Mw/Mn] |
|-------------|---------|---------|---------|-------------|
| Agilent RID | 443000 | 429000 | 443000 | 1,03 |

Additional Methods - Results

| Method | Mw [Da] |
|-------------------------------------|---------|
| Light Scattering, on-line (SLD7x00) | 405000 |

Mw = Weight average molecular weight
 Mn = Number average molecular weight
 Mp = Molar mass at the peak maximum
 PDI = Polydispersity Index

Light Scattering run on-line, based on Toluene Rayleigh Ratio $R = 1.404 \cdot 10^{-5} \text{ cm}^{-1}$ at 633 nm.

System and instrument validation based on Certified Reference Materials Poly(styrene) Lot No: ERM-FA001.

| | |
|----------------------|------------|
| Sample concentration | 1.0047 g/L |
| Inject volume | 100µL |
| Sample dn/dc | 0.111mL/g |

Microstructure of the polymer:

Poly(isoprene-3.4) 5%
 Poly(isoprene-1.4) 95%

Polymer stabilized with 0.1% BHT.

Storage: Store the tightly recapped polymer standard in a dry, dark, cool area; e.g. a refrigerator (4 °C).

Date of expiry: yyyy/mm/dd (See also product label.)

Date of approval: yyyy/mm/dd

Manufacture and control according to PSS method of analysis



Dr. T. Hofe
production director

